13. (Amended) An optical transmission line, comprising:

a first and second optical cables, each having a first optical fiber having a positive chromatic dispersion at a signal light wavelength and a second optical fiber having a negative chromatic dispersion at the same wavelength, each said respective pair of first and second optical fibers having been connected by fusion splicing to form a joint being accommodated in said respective first and second optical cables;

said first and second optical cables being installed on land and jointed together in such a way that the first optical fibers from each said optical cable are connected together by fusion splicing and the second optical fibers from each said optical cable are connected together by fusion splicing.

REMARKS

Claims 1-13 are active and pending in the present application. Claims 1, 7 and 10-13 are objected to for various grammatical informalities. Claims 1-3, 5, 6, 8 and 10-13 stand rejected under 35 USC 103 as unpatentable over Tsukitani et al. in view of Morimoto et al. Claim 4 stands rejected under 35 USC 103 as unpatentable over Tsukitani et al. in view of Morimoto et al. and further in view of Srikant. Claim 7 stands rejected under 35 USC 103 as unpatentable over Tsukitani et al. in view of Morimoto et al. and further in view of Ray et al. Claim 9 stands rejected under 35 USC 103 as unpatentable over Tsukitani et al. in view of Morimoto et al. and further in view of Fangmann et al.

In response to the objections to the claims, claims 1 and 10 have been amended so that the phrase "joint, being" now reads "joint being". Also, claims 10-13 have been

amended to more clearly recite what is meant by the phrase "optical fibers of the same type." Claim 7 has been amended so that the phrase "said fusion splicing operation" now reads "said fusion splicing." No new subject matter has been improperly introduced by these claim amendments.

The Examiner asserts that Tsukitani et al. disclose the invention substantially as recited in claim 1 but admits that Tsukitani et al. do not disclose an optical cable. However, the Examiner contends that Morimoto et al. disclose an optical cable comprising a hybrid transmission line similar to that of Tsukitani et al. and concludes that one of ordinary skill would have been motivated to combine these references "to provide suitable optical and mechanical characteristics for practical usage."

Applicants respectfully disagree with the Examiner's characterization of the optical cable disclosed by Morimoto et al. In particular, Morimoto et al. states that "we develop novel dispersion compensation cables." (emphasis added, see Abstract). Morimoto et al. also admit that "we manufactured ribbon-slotted type and loose type cable using RDF." (emphasis added, see, last line of page 52, left column). In addition to these admissions, Morimoto et al. shows the transmission characteristic of their cable without identifying a ratio between the lengths of a dispersion-compensating fiber (i.e., negative dispersion fiber) and a dispersion compensated fiber (i.e., positive dispersion fiber). In view of these aspects of the Morimoto et al. reference, Applicants urge that the optical cable taught by Morimoto et al. has only a dispersion-compensating fiber (RDF). Thus, the transmission lines shown in FIG. 1 of Morimoto et al. comprise the "dispersion compensating cable" **and another cable**.

Accordingly, even if a skilled artisan were to modify the hybrid transmission line of Tsukitani et al into a transmission line as taught by Morimoto et al., the transmission line would consist of two physically distinct cables and the need would remain to perform connection of the different types of optical cables by a fusion splicing operation in the field.

In direct contrast, claims 1, 10, 11, 12 and 13 all recite an optical cable having two different optical fibers connected by fusion splicing at a joint being accommodated in the cable. The cable, itself, has a reduced splicing loss, because the fusion splicing is done in the factory so that the joint is accommodated in the cable. By using this cable and installation method, the operation of connecting different types of optical fibers by fusion splicing in the field is unnecessary and high efficiency of installation work, as well as reduced splicing loss, can be affected.

Applicants, therefore, urge that the combination of Tsukitani et al and Morimoto et al. do not disclose or suggest every feature recited in the independent claims. Thus, this combination of references does not provide the factual basis to support a prima facie case of obviousness under 35 USC 103 and reconsideration and withdrawal of the rejection of claims 1-3, 5, 6, 8 and 10-13 are respectfully requested.

None of the other references cited by the Examiner as disclosing the specific limitations of claims 4, 7 and 9 disclose or suggest the above-identified claim features omitted by Tsukitani et al. and Morimoto et al. Accordingly, none of the combinations of references which rely on Tsukitani et al. and Morimoto et al. provide the factual basis for establishing a prima facie case of obviousness under 35 USC 103. Therefore,

reconsideration and withdrawal of the rejection under 35 USC 103 of claims 4, 7 and 9 are respectfully requested.

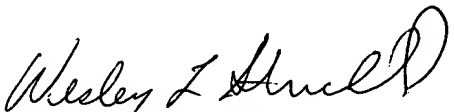
SUMMARY

In view of the above remarks and amendments, Applicants believe that claims 1-13 are in condition for allowance and passage of the case to issue is respectfully requested.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT, WILL & EMERY



Wesley L. Strickland
Registration No. 44,363

600 13th Street, N.W.
Washington, DC 20005-3096
(202)756-8000 WLS:lnm
Facsimile: (202)756-8087
Date: May 19, 2003

MARKED-UP VERSION OF AMENDED CLAIMS

1. (Amended) An optical cable to be installed on land, comprising:

a first optical fiber having a positive chromatic dispersion at a signal light wavelength; and

a second optical fiber having a negative chromatic dispersion at the same wavelength;

wherein said first and second optical fibers have been connected by fusion splicing at a joint[,] being accommodated in said optical cable.

7. (Amended) An optical cable according to claim 2, wherein said joint has been subjected to heat treatment and re-coated subsequent to said fusion-splicing [operation].

10. (Amended) A method of installing an optical cable, comprising the steps of:

preparing a first optical cable having a first optical fiber having a positive chromatic dispersion at a signal light wavelength and a second optical fiber having a negative chromatic dispersion at the same wavelength, said first and second optical fibers having been connected by fusion splicing to form a joint [,] being accommodated in said first optical cable;

preparing a second optical cable accommodating [the same types of optical fibers as those in said first optical cable] a third optical fiber having a positive chromatic dispersion at said signal light wavelength and a fourth optical fiber having a negative chromatic dispersion at the same wavelength;

installing said first and second optical cables on land; and

jointing said first and second optical cables in such a way that the [optical fibers of the same type accommodated in said first and second optical cables] first optical fiber and third optical fiber are connected together by fusion splicing and the second optical fiber and fourth optical fiber are connected together by fusion splicing.

11. (Amended) A method of installing an optical cable, comprising the steps of:

preparing a first and second optical cables each having a first optical fiber having a positive chromatic dispersion at a signal light wavelength and a second optical fiber having a negative chromatic dispersion at the same wavelength, each said respective pair of first and second optical fibers having been connected by fusion splicing to form a joint [,] being accommodated in said respective optical cables;

installing said first and second optical cables on land; and

jointing said first and second optical cables in such a way that the [optical fibers of the same type accommodated in said first and second optical cables] first optical fibers from each said optical cable are connected together by fusion splicing and the second optical fibers from each said optical cable are connected together by fusion splicing.

12. (Amended) An optical transmission line, comprising:

a first optical cable having a first optical fiber having a positive chromatic dispersion at a signal light wavelength and a second optical fiber having a negative chromatic dispersion at the same wavelength, said first and second optical fibers having been connected by fusion splicing to form a joint [,] being accommodated in said first optical cable;

a second optical cable accommodating [the same types of optical fibers as those in said first optical cable] a third optical fiber having a positive chromatic dispersion at said signal light wavelength and a fourth optical fiber having a negative chromatic dispersion at the same wavelength;

said first and second optical cables being installed on land and jointed together in such a way that the [optical fibers of the same type accommodated in said first and second optical cables] first optical fiber and third optical fiber are connected together by fusion splicing and the second optical fiber and fourth optical fiber are connected together by fusion splicing.

13. (Amended) An optical transmission line, comprising:

a first and second optical cables, each having a first optical fiber having a positive chromatic dispersion at a signal light wavelength and a second optical fiber having a negative chromatic dispersion at the same wavelength, each said respective pair of first and second optical fibers having been connected by fusion splicing to form a joint [,] being accommodated in said respective first and second optical cables;

said first and second optical cables being installed on land and jointed together in such a way that the [optical fibers of the same type accommodated in said first and second optical cables] first optical fibers from each said optical cable are connected together by fusion splicing and the second optical fibers from each said optical cable are connected together by fusion splicing.